Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 (Currently amended). A method for generating oligodendrocytes, suitable for repairing damage caused by demyelinating diseases, comprising growing embryonic stem (ES), embryoid bodies (EB) derived from ES cells and/or neurosphere (NS) cells derived from ES or EB cells in the presence of one or more gp130 activators selected from CNTF, OSM, IL-6, IL6R/IL6 chimera and IL-11.

2 (Original). The method according to claim 1, wherein the gp 130 activator is an IL6R/IL6 chimera, a mutein, functional derivative, active fraction, circularly permutated derivative or salt thereof.

3 (Original). The method according to claim 2, wherein the gp 130 activator is IL-6.

4 (Previously presented). The method according to claim 1, wherein the cells are NS cells.

5 (Original). The method according to claim 4, wherein the cells are dissociated NS cells.

6 (Previously presented). The method according to claim 1, wherein the cells are EB cells.

7 (Previously presented). The method according to claim 1, wherein the oligodendrocyte is of O1+ lineage.

8 (Previously presented). The method according to claim 1, wherein the oligodendrocyte is of O4+ lineage.

9 (Previously presented). The method according to claim 1, wherein the demyelinating disease is selected from multiple sclerosis, stroke, spinal cord injury, neural trauma and demyelination of axon.

10 (Withdrawn). Oligodendrocytes obtainable by a method according to claim 1.

11-19 (Cancelled)

20 (Withdrawn-Currently amended). A pharmaceutical composition comprising ES, EB derived from ES cells and/or NS cells derived from ES or EB cells and one or more gp 130 activators selected from CNTF, OSM, IL-6, IL6R/IL6 chimera and IL-11.

21 (Withdrawn-Currently amended). A pharmaceutical composition comprising ES, EB derived from ES cells and/or NS cells derived from ES or EB cells and an expression vector

encoding a gp 130 activator selected from CNTF, OSM, IL-6, IL6R/IL6 chimera and IL-11.

22 (Withdrawn-Currently amended). A pharmaceutical composition comprising engineered ES, EB derived from ES cells and/or NS cells derived from ES or EB cells producing one or more gp 130 activators selected from CNTF, OSM, IL-6, IL6R/IL6 chimera and IL-11.

23 (Withdrawn). The pharmaceutical composition according to claim 20, wherein the gp 130 activator is IL6R/IL6 chimera, a mutein, functional derivative, active fraction, circularly permutated derivative or salt thereof.

24 (Withdrawn). The pharmaceutical composition according to claim 23, wherein the gp 130 activator is IL-6.

25 (Withdrawn). The pharmaceutical composition according to claim 20, for enhancing oligodendrocyte differentiation from NS cells.

26 (Withdrawn). The pharmaceutical composition according to claim 25, for enhancing oligodendrocyte differentiation from dissociated NS cells.

27 (Withdrawn). The pharmaceutical composition according to claim 20, for enhancing oligodendrocyte differentiation from EB cells.

28 (Withdrawn). A pharmaceutical composition comprising an oligodendrocyte according to claim 10.

29 (Withdrawn). A pharmaceutical composition according to claim 20 for treating damage caused by demyelinating diseases in a subject in need.

30 (Withdrawn-Currently amended). A culture medium suitable for promoting differentiation of embryonic stem (ES), embryoid bodies (EB) derived from ES cells and/or neurosphere (NS) cells derived from ES or EB cells into oligodendrocytes comprising one or more gp 130 activators selected from CNTF, OSM, IL-6, IL6R/IL6 chimera and IL-11 in a solution suitable for culturing the cells.

31 (Withdrawn). The culture medium according to claim 30, wherein the gp 130 activator is IL6R/IL6 chimera, a mutein, functional derivative, active fraction, circularly permutated derivative or salt thereof.

32 (Withdrawn). The culture medium according to claim 31, wherein the gp 130 activator is IL-6.

33 (Withdrawn-Currently Amended). The culture medium according to claim 30, suitable for promoting differentiation of embryonic stem (ES), embryoid bodies (EB) derived from ES cells and/or neurosphere (NS) cells derived from ES or EB cells into oligodendrocytes of O1+ lineage.

34 (Withdrawn-Currently Amended). The culture medium according to claim 30, suitable for promoting differentiation of embryonic stem (ES), embryoid bodies (EB) derived from ES cells and/or neurosphere (NS) cells derived from ES or EB cells into oligodendrocytes of O4+ lineage.

35 (Withdrawn-Currently Amended). A culture medium according to claim 30, wherein the solution is suitable for culturing EB derived from ES cells.

36 (Withdrawn-Currently Amended). A culture medium according to claim 30, wherein the solution is suitable for culturing NS derived from ES or EB cells.

37 (Withdrawn). A method of treatment of demyelinating diseases comprising the administration of an effective amount of the oligodendrocytes according to claim 10 to a subject in need.

38 (Withdrawn). The method according to claim 37, wherein oligodendrocytes are administered directly in the CNS of the subject in need.

39 (Withdrawn). The method according to claim 37, wherein the oligodendrocytes are administered by IV injection of the subject in need.

40 (Withdrawn-Currently amended). A method of treating a demyelinating disease comprising the administration of ES, EB

derived from ES cells and /or NS cells derived from ES or EB cells and effective amount of one or more gp 130 activator selected from CNTF, OSM, IL-6, IL6R/IL6 chimera and IL-11 in a subject in need.

41 (Withdrawn). The method according to claim 40, wherein the gp 130 activator is an IL6R/IL6 chimera, a mutein, functional derivative, active fraction, circularly permutated derivative or salt thereof.

42 (Withdrawn). The method according to claim 41, wherein the gp 130 activator is IL-6.

43 (Withdrawn). The method according to claim 40, wherein the cells are NS cells.

44 (Withdrawn). The method according to claim 43, wherein the cells are dissociated NS cells.

45 (Withdrawn). The method according to claim 40, wherein the cells are EB cells.

46 (Withdrawn). The method according to claim 40, wherein the gp 130 activator is administrated by an expression vector.

47 (Withdrawn). The method according to claim 40, wherein the gp 130 activator is administrated by a recombinant cell expressing the activator.

48 (Withdrawn). The method according to claim 40, wherein the cells expressing the activator are ES cells.

49 (Withdrawn). The method according to claim 40, wherein the cells expressing the activator are EB cells.

50 (Withdrawn). The method according to claim 40, wherein the cells expressing the activator are NS cells.

51 (Withdrawn). The method according to claim 40, wherein the gp 130 activator is contacted with the cells ex-vivo prior to administration.

52 (Withdrawn). The method according to claim 40, wherein the gp 130 activator and/or the cells are administered directly in the CNS of the subject in need.

53 (Withdrawn). The method according to claim 40, wherein the gp 130 activator and/or the cells are administered by IV injection of the subject in need.